

XD 26/Computer Prebs. Boy

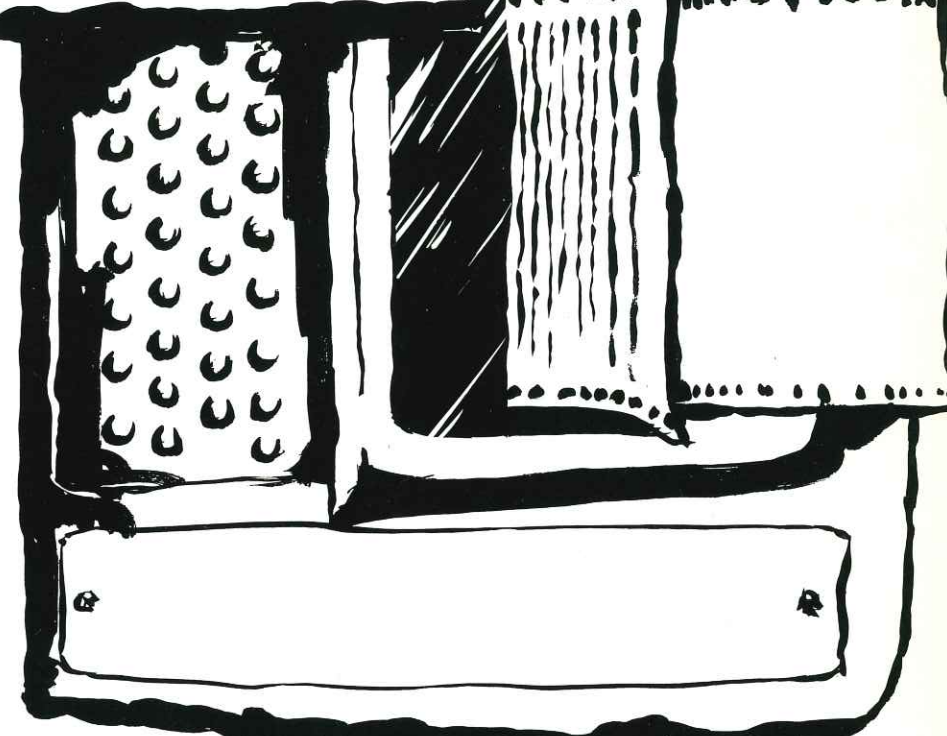
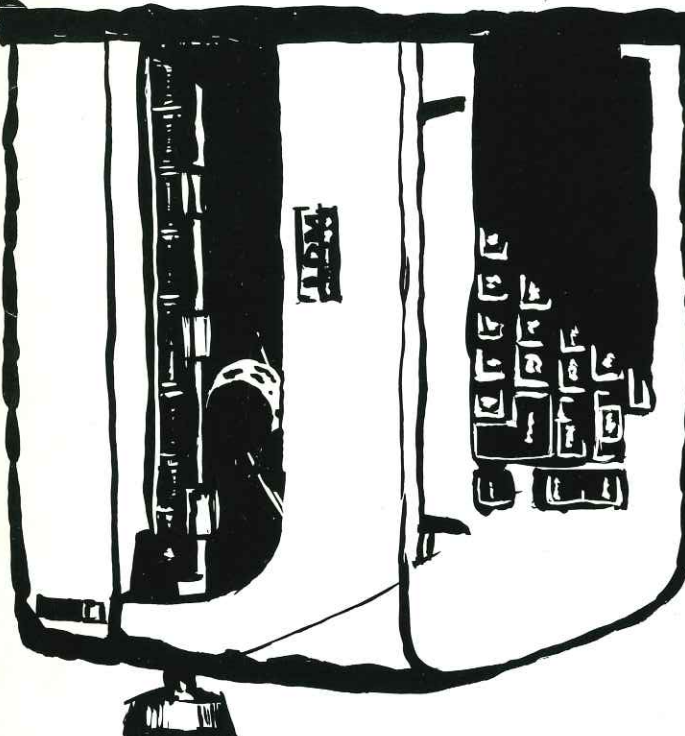
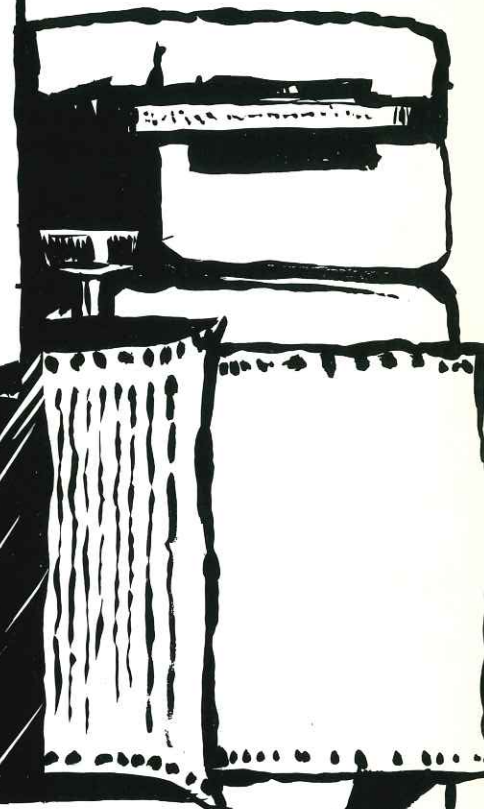
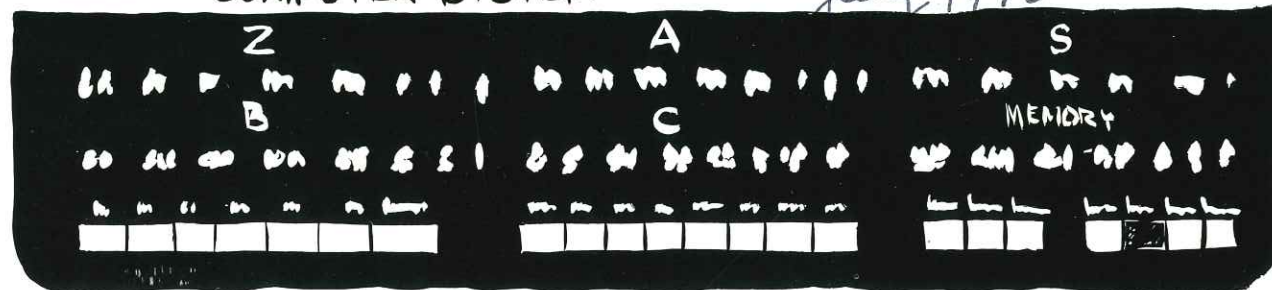
~~XD 64/Printing Prebs Boy~~

WANG

MODEL 3300  
COMPUTER SYSTEM

Cat. # 700-0283A  
July 1970

CLEAR



WANG 3300 BASIC

WANG 3300 BASIC

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WANG 3300 BASIC

Wang 3300 BASIC is a time sharing system that provides sophisticated software performance at costs never before available. This carefully engineered combination of hardware and software, designed around the powerful Wang 3300 computer, features the terminal option of either standard teletypes or typewriter terminals. Wang has added features to the most popular conversational language, BASIC, for greatly simplified

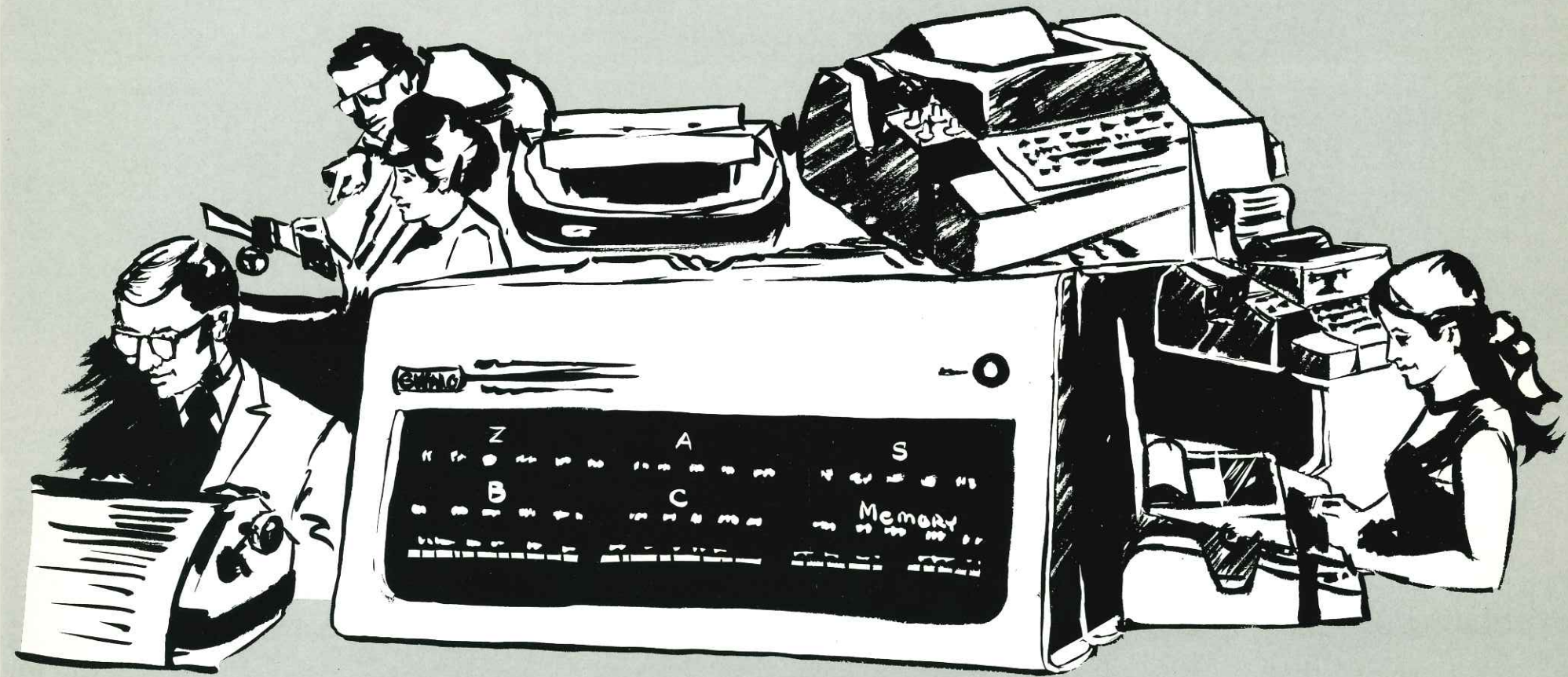
programming and terminal operation.

If your organization is a user or potential user of time sharing, we encourage you to investigate Wang 3300 BASIC from the important aspects of simplicity, economy, efficiency, reliability and privacy. Heavy user or light user, Wang 3300 BASIC is designed to substantially reduce your time sharing costs.

WANG 3300 BASIC

WANG 3300 BASIC







# WHAT IS WANG 3300 BASIC?

Wang 3300 BASIC is a complete time sharing system: central processor memory terminal, peripherals and software. Traditionally, time sharing computer systems required a major capital expenditure — for hardware, software and an operating staff. Wang 3300 BASIC represents a totally new concept in time sharing systems; the adaptation of a sophisticated software package (BASIC) to a uniquely designed low cost central processor (the 3300) has made available the first low cost, efficient and expandable small computer time sharing system. Wang 3300 BASIC is the time sharing system that can grow from one terminal at \$14,000 to sixteen terminals and full peripherals at \$200,000.

Now scientists, researchers, engineers and students can have full-time terminal capability with a proven conversational language at prices that can be economically justified. The system is readily expanded to sixteen on-line users simultaneously providing each terminal with access to the standard set of BASIC verbs, trigonometric, math and user defined functions.

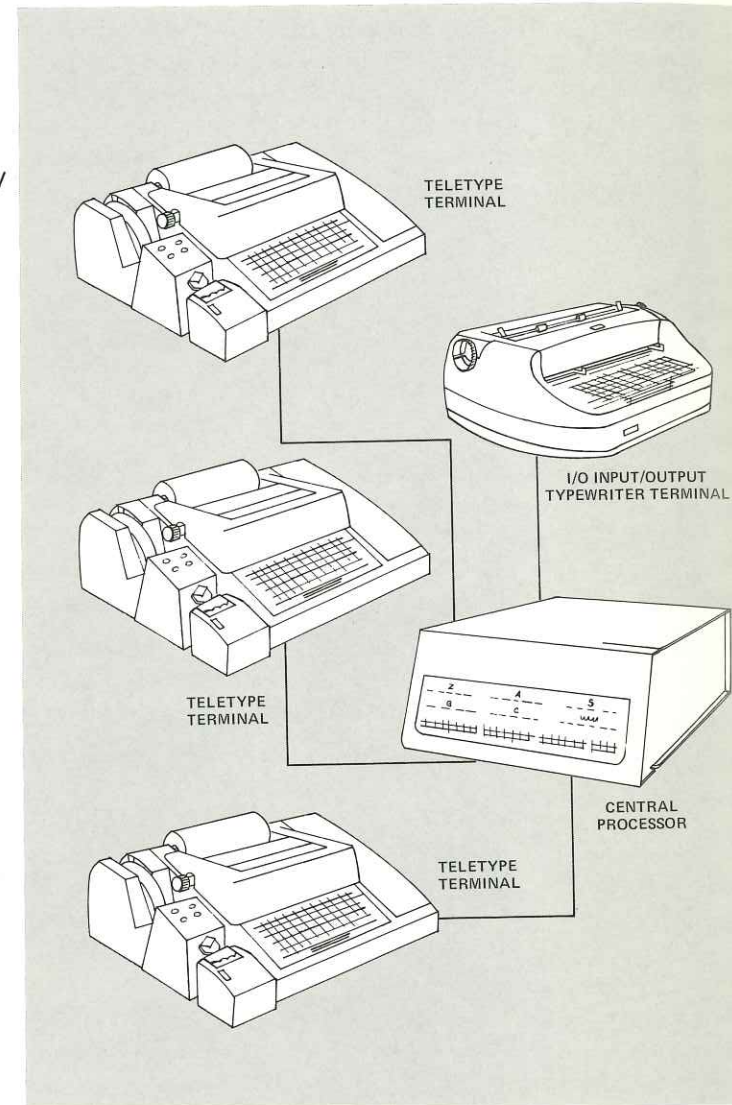
BASIC, the language for the 3300 time sharing system, was designed specifically as a problem solving tool for students, scientists and engineers. Its similarities to everyday

mathematical expressions enable even a beginner to start programming within the first hour at his terminal. The wide acceptance that BASIC has gained in the computer industry over the past seven years has resulted in the availability of extensive applications software.

Wang's 3300 standard system program library provides efficient, relevant programs on high speed magnetic tape cassettes. Available — at nominal cost — are programs for business, civil engineering, electrical engineering, finance, games, general science, mathematics, mechanical engineering, statistics and surveying. Programs for other disciplines will be available soon.

The terminal options, high speed cassettes and special software features such as COMMON DATA that allows the simplified chaining of programs to meet the large storage requirements of certain users, cohesively work together to comprise a complete package — at a price performance ratio that is in one word — unbeatable.

Wang Laboratories has such confidence in the 3300 BASIC time sharing system that it is the first in the industry to offer a special 60-day cancellation period. If you are not perfectly satisfied, all system costs, except for the \$1500 setup and initialization fee, will be refunded.



# THE "BASICS" OF 3300 BASIC

Industry and Education agree that BASIC is the most popular conversational language.

BASIC was developed at Dartmouth College specifically as a simplified, easy to learn, and practical approach for solving problems in time sharing systems. Wang 3300 BASIC goes one step further by providing additional built-in software features for operator convenience and efficiency. Only Wang 3300 BASIC can offer all of these unique features:

**Immediate Mode** - Each terminal user can EASILY have the system function as a powerful desktop calculator. Unnumbered BASIC statements are IMMEDIATELY executed in calculator fashion - even during program operation.

**Instant Diagnostic Pointer** - As it is entered, each line of a program is scanned for syntax and logic errors. When an error is detected, the system AUTOMATICALLY indicates both the nature of the error and the specific character which is incorrect.

**TRACE Statement** - This feature allows SELECTIVE debugging and checking by tracing the execution of a BASIC program. Variable values and transfer statements are printed for any or all parts of a program.

**COMMON Statement** - A provision for common data allocation allows each user to retain variables between chained programs, permitting more efficient use of his allocated core space and a high degree of sophistication in his work.

**Greater Precision** - The system provides a full eight digits of decimal, floating point accuracy for arithmetic operations and math and trig functions. By performing in decimal, a number entered as .2 is not printed out later as .19999999. Exponents from  $10^{-6.3}$  to  $10^{6.3}$  can be accommodated.

**Efficient PRINT and TAB Formats** - Extended by Wang to provide versatility

and flexibility in GRAPHING functions.

These features, plus Boolean logical functions, and unrestricted loop and sub-routine nesting (subject to core space limitation) make Wang 3300 BASIC the most flexible and convenient software in the industry.

In Wang BASIC it's simple, for example, to solve the quadratic equation for real roots.

$$2x^2 + 9x + 3 = 0$$

$$\text{when } x = \frac{-B \pm \sqrt{B^2 - 4AC}}{2A}$$


Turn on the terminal — press ATTENTION key  
 BASIC READY (The system is ready to go)  
 :10 REM THIS SOLVES THE QUADRATIC  
 :20 LET B = 9, LET A = 2, LET C = 3  
 :30 LET S = SQR (B ↑ 2 - 4 \* A \* C)  
 :40 PRINT "X1=" (-B+S) / 2\*A, "X2=" (-B-S) / 2\*A  
 :RUN  
 X1 = -.36254134 X2 = -4.1374586

Wang's "IMMEDIATE MODE" — To turn the terminal into a powerful ELECTRONIC CALCULATOR.

For example, to solve:  $\text{Log}_e (5.2 + 6^3) / \text{SINE} (.46)$   
 Wang BASIC command: PRINT LOG (5.2 + 6 ↑ 3) / SIN (.46)  
 and immediately the answer: 6.2111148 is typed out.



# THE CENTRAL PROCESSOR

 **WANG** MODEL 3300  
COMPUTER SYSTEM

Clear



<b>Z</b> 80 40 20 10 8 4 2 1								<b>A</b> 80 40 20 10 8 4 2 1								<b>S</b> P Z D V 1 0															
<b>B</b> 80 40 20 10 8 4 2 1								<b>C</b> 80 40 20 10 8 4 2 1								<b>Memory</b> 80 40 20 10 8 4 2 1															
Stop								Ca								I/o															
B C Z A S M Core <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>								80 40 20 10 8 4 2 1 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>								Run Display Enter <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>								Load Step ExQ Go <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>							

The Wang 3300 is an integrated circuit, general purpose mini-computer. Unlike most computers in this class, it was specifically designed to be the central processor for multi-terminal, time-sharing applications for higher level language systems. The low-cost 3300 can support sophisticated software such as BASIC that normally requires a major capital investment in computer hardware. With modular design, which permits expansion of the 1.6 microsecond full-cycle memory to more than 65,000 words of core storage, and multiple peripheral devices, the system can handle a full complement of 16 terminals simultaneously. **YOU WON'T OUTGROW A WANG 3300.**

The system design incorporates such features as:

- A powerful repertoire of 72 instructions, including 21 memory reference instructions.

- A flexible and powerful I/O logic design which includes an I/O bus structure to handle up to 128 low and medium speed peripheral devices and Direct Memory Access Channel logic to control high speed devices, such as a disk, at transfer rates up to 300,000 cps.
- Nine modes of addressing, including a unique auto-increment/auto-decrement indirect addressing mode throughout all of memory. In this mode the indirect address is decremented before and incremented after single or double byte memory transfers. This produces a true push-pop access mode for handling table and list processing efficiently. In many applications, it provides the flexibility and speed equivalent to an unlimited number of index registers, and also eliminates the time consuming bookkeeping requirements associated with index registers.

- Six arithmetic instructions which operate in both binary and decimal mode. In decimal mode, 4 bit decimal groups are operated on in decimal arithmetic. This feature eliminates the inaccuracies and time inefficiencies associated with decimal to binary conversions and binary arithmetic, and provides a multi-precision arithmetic capability, resulting in a full 8 digits of decimal accuracy.
- The terminal option of standard 10 character per second teletypes or reliable 15 character per second I/O typewriters\*. Either terminal may access low cost/high speed magnetic tape cassettes for programs and data storage.

None of these features are unique, but only in the Wang 3300 can you find all of them and at a low cost... a breakthrough both in engineering and in user convenience.

\*Built around a modified IBM Selectric® Typewriter.

I am intrigued with your new concept in time sharing systems

- ☐ Please send me a complete technical specification sheet  
☐ I would like a price quote for a \_\_\_\_\_ user system  
☐ I would like to talk with a Wang Time Sharing Analyst

Name \_\_\_\_\_ Title \_\_\_\_\_  
 Organization \_\_\_\_\_  
 Division \_\_\_\_\_  
 Address \_\_\_\_\_  
 City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_  
 Telephone \_\_\_\_\_





# SYSTEMS SUPPORT

Wang Laboratories has made a TOTAL commitment in the small computer time sharing industry.

All time sharing computer systems require continuing efforts by the manufacturer to improve system software efficiency, develop and expand library programs, maintain the hardware systems and coordinate customer training. PHI Computer Services, Inc., a wholly owned Wang subsidiary, is a specialist in computer consulting, programming and software design and development. With our hardware capability and their software knowledge and with over 130 sales and service offices in the U.S. and overseas, Wang Laboratories is in a unique position to provide the necessary support. We take pride in providing this type of turn-key system at a very reasonable cost.

# SUMMARY

We've just begun to highlight the many features that make our Wang 3300 BASIC the most unique new time-sharing system on the market — the cost saving advantages, the proven conversational language BASIC, the expansion capabilities — these are just a few. The real test of our BASIC time sharing system is its operation in your business. Let us explain how our 3300 can really pay off in increased work effectiveness for you ... fill in and return the attached postcard or call your local Wang sales office today.

**WANG**  
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